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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHEA, THORL

ART UNIT

PAPER NUMBER

1795

NOTIFICATION DATE

DELIVERY MODE

08/04/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 09/928,339	Applicant(s) OIKAWA, TOKUJU	
	Examiner Thorl Chea	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 and 26-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23, 26-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is responsive to the communication on May 1, 2008; claims 1-23, 26-33 are pending in this instant application; claims 23-24 have been canceled.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-23, 26-31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as originally filed considered as a whole fails to provide support for the “SBR latex containing substantially no NH_4^+ ” presented in claim 1. The binder shown in the image forming layer such as SBR latex having, glass transition temperature :17 °C with $\text{K}_2\text{S}_2\text{O}_8$ was used as polymerization initiator on page 92 does not provide support the support that the limitation “SBR latex containing substantially no NH_4^+ ”. The specification as originally filed disclose the use of any binder including the LACTARS taught in Japanese Patent N0. 112072 (JP’072) such as LACTARS 7310K, 3307B, 4700H, 7132C. See LACTARS on page 60 of the present specification disclosure and that taught in JP’072 in [0210]. The amount of NH_4^+ is related to the use of NH_4OH as pH modifier. See page 106, Table 1 of the present specification.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-23, 26-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claiming of “substantially no NH_4^+ ” in “SBR latex containing substantially no NH_4^+ ” is indefinite with respect to amount of NH_4^+ since the specification disclosure fails to provide mete and bound of “substantially no NH_4^+ ”.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-16, 18-31 are rejected under 35 U.S.C. 103(a) as obvious over the combination of Japanese Patent N0. 112072 (JP'072) and Yamashita (US Patent No. 6,071,687)

The JP'072 discloses a photothermographic material contains a compound of formula (1), (2) and (3) in condition (I) and the compound of formula (II) claimed in the present claimed invention. See claims 1-4; paragraph [0098] to [0100] and Table 1 in paragraph [0285]. See also the use of polymer latex including LACSTARs (SBR) in [0196] to [0204]; the use of SBR latex 3307B with glass transition temperature of 17 °C in the emulsion layer in [0267]; the use of polymer latex in the protective layer in [0225]; the use of lubricant such as wax in [0227], and

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the heat-development apparatus page 1 of 1. The samples 12-14 contain NaOH as pH modifier. Yamashita discloses SBR latex, which has been purified by ultrafiltration until ionic conductivity of 1.5 mS/cm was reached. See column 29, lines 7-57. JP'072 may not disclose whether the SBR latex containing substantially no NH_4^+ present in the claimed invention. However, it has been known in Yamashita to purify the SBR latex before using as binder for the use thereof in the photothermographic material. Therefore, it would have been obvious to use the purified SBR latex taught in Yamashita as SBR latex taught in JP'072 to improve its binding property, and thereby provide a material as claimed.

8. Claims 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent N0. 112072 (JP'072) as applied to claims 1-16, 18-30 above, and further in view of Ito et al and EP' 1096310. Ito et al in column 82 lines 16-30 discloses phosphorus oxide-derive compound as contrast enhancer for a photothermographic material. See also EP'310 on page 79, claim 8, and the control of film surface pH on page 52, paragraph [0200].

It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the phosphorus oxide-derive compound taught in Ito et al and EP'310 as contrast enhancer for the material of JP'072, and thereby provide a material as claimed.

Response to Arguments

9. Applicant's arguments filed May 30, 2007 have been fully considered but they are not persuasive because of the reason set forth in the rejections above.

It is still the Examiner's position that the specification as originally filed fails to support for the claiming of "SBR latex containing substantially no NH_4^+ ".

The applicants argue that the condition I of the present invention specifies that the ammonium content in all the layers formed on the image forming layer side of the support be limited. This is specifically disclosed, for instance, in the paragraph bridging pages 25 and 26 of the present specification. This disclosure is coupled with the preparation of the coating solution for the image-forming layer at pages 91-92. In particular, the binder is SBR latex. Thus, the generic preferred understanding of substantially no ammonium is coupled with the specific example of a SBR latex. This certainly constitutes sufficient written description such, that those skilled in the art would understand that the Applicant was in possession of the invention as claimed at the time of filing.

The specification disclosure as originally filed on pages 25-26 that “in condition I according to the present claimed invention, the ammonium content per m^2 in all the layers formed on the image-forming layer side of the support is defined to be 0.06 mmol/m^2 or less, and it is more preferably 0.03 mmol/m^2 or less”. The new limitation presented in the claim is “wherein the image forming layer comprises SBR latex containing substantially no NH_4^+ , and said SBR has a glass transition point falling within the range from -30°C to 40°C .”

The specification fails to disclose whether the SBR contains the NH_4^+ and the NH_4^+ presented in the all layers of the material derive from a base used in balancing the pH of the coating rather than that from the SBR. Therefore, the claiming of the SBR containing substantially no NH_4^+ raises new issue to the specification to the specification disclosure. The applicant was not in possession of the subject matter newly presented in the claims when the original disclosure fails to present such subject matter. The amount of ammonium presented in the claims is not related to the SBR presented in the claimed invention. The SBR polymer latex used in Example 2, page

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92, is SBR latex, glass transition temperature: 17°C. $K_2S_2O_8$ was used as polymerization initiator. Therefore, the SBR used in the Example 1 contains no NH_4^+ , and thereby the all the layers formed on the image-forming layer side of the support contains no NH_4^+ if that SBR used as the binder. The amount of NH_4^+ presented in the claimed invention derive from the use of pH modifier to control the surface layer of the photothermographic material. See page 92, under “pH modifier (type shown in Table 1). Table 1 shows the use of either NH_4OH or $NaOH$ as type of pH modifier. It is clear from the specification that the amount of ammonium ion content does not derive from the SBR. The scope of the “SBR latex containing substantially no NH_4^+ ” means that there is a certain amount of ammonium ions containing in the SBR latex which is not disclosed in the specification as originally filed. Moreover, the scope of “SBR latex containing substantially no NH_4^+ ” is indefinite since the specification fails to provide a meter and bound of the amount within the scope of “substantially no NH_4^+ ”. “Term such as “substantially equal”, “about”, “closely approximate” etc. where held to be definite as long as the specification provide a standard for measuring the degree of closeness or proximity. *Andrew Corp. v. Gabriel Electronics* 6 USPQ 2d 2010 (Fed. Cir. 1988); *Gore & Assoc. v. Garlock* 6 USPQ 2d 1277 (Fed. Cir. 1988); *Hybrotech Inc. v. Monoclonal Antibodies Inc.* 231 USPQ 81 (Fed. Cir. 1986); *Rosemount Inc. v. Beckman Instruments Inc.* 221 USPQ 1 (Fed. Cir. 1984); *Seattle Box Co. Inc. v. Industrial Coating & Packing Inc.* 221 USPQ 568 (Fed. Cir. 1984). In this case, the specification disclosure fails to provide the standard for measuring the degree of the closeness of substantially no NH_4^+ . Therefore, the claimed language is indefinite.

The applicants argue that: The polymer latex used in Examples was not intentionally added with ammonia, and it is explicit that the latex used in Examples did not substantially contain

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ammonia. Furthermore, as shown in the Oikawa Declaration (of record) using a polymer latex containing substantially no NH_4^+ can achieve the effects of the present invention, low fog, high D_{max} (maximum density), less increase of fog during storage and little temperature and humidity dependency during development. On the other hand, using a polymer latex substantially containing NH_4^+ cannot achieve the effects of the present invention.

The argument is not persuasive for the reason set forth in the office action on November 2, 2007. The showing in the Declaration is not consistent with the specification disclosure as originally filed. The Declaration fails to recognize whether the SBR contains substantially no ammonium ion content provide a photothermographic material with an improvement of properties provided in the argument. The specification disclosure considered as a whole is related to the use of ammonium hydroxide as pH modifier for the coating solution. The showing of the improvement of the photographic properties using an SBR contains substantially no ammonium ion is new concept, and has little probative value. The SBR latex used in the Declaration has glass transition temperature of 17°C and was prepared by polymerization using $\text{K}_2\text{S}_2\text{O}_8$ as polymerization initiator. The SBR latex claimed invention has glass transition temperature ranging from -30°C to 40°C , and containing substantially no NH_4^+ . Thus, the Declaration is not commensurate with the scope of the claimed invention. There is no showing the criticality of the range of the glass transition temperature of from -30°C to 40°C , and the amount of ammonium ions. The Declaration shows the amount of ammonium is 0.01 mmol/m^2 in the image forming layer, whereas the claimed invention is related to the using of SBR polymer latex containing substantially no ammonium ions, and the amount of ammonium ion in the image forming layer is from 0.06 mmol/m^2 or less. The amount of the 0.01 mmol/m^2 does not

represent the range from 0-06 mmol/m². The applicants also refer to the response to the applicants' argument provided in the office action on November 2, 2007. The applicants appears to provide no complete response to the issues raised by the Examiners concerning the utility of the content of the ammonium ions and else.

The argument with respect to Yamashita is not persuasive for same reason provided in the previous action. It would have understood in Yamashita that SBR latex needs to be purified to get rid of the impurity, and it would have understood that the impurity would affect the binding property of the SBR latex, and thereby lower the quality of the photothermographic material.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TC
2008-07-29

/Thorl Chea/
Primary Examiner,
Art Unit 1795